

Applicants: RAVI, Ashoke et al.
Serial Number: 10/608,128

Assignee: Intel Corporation
Attorney Docket: P-5782-US

Amendments to the Claims

The following listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) An apparatus comprising:
a first phase-shift generator to provide a phase-shift of substantially $\pi/2$ radians to an oscillation signal between a first oscillation tank, which provides substantially no phase-shift, and a second oscillation tank;
a second phase-shift generator to provide a phase-shift of substantially $\pi/2$ radians to the oscillation signal from the second oscillation tank; and
a phase-inverter to invert the phase of the oscillation signal,
wherein the phase-inverter comprises an amplifier to provide a gain such that a total gain across a loop, which comprises the amplifier, the first and second oscillation tanks, and the first and second phase-shift generators, is equal to substantially one.
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Currently Amended) The apparatus of claim [[5]] 1, comprising one or more transconductors to convert said oscillation signal from voltage to current.

7. (Currently Amended) An oscillator comprising:
- a first oscillation tank which produces substantially no phase-shift;
 - a second oscillation tank which produces substantially no phase-shift; ~~[[and]]~~
 - a first phase-shift generator to shift by substantially $\pi/2$ radians a phase of a signal from said first oscillation ~~[[tank.]]~~ tank;
 - a second phase-shift generator to shift by substantially $\pi/2$ radians a phase of a signal from said second oscillation tank; and
 - a phase-inverter to invert a phase of a signal from said additional phase-shift generator,
 - wherein the phase-inverter comprises an amplifier to provide a gain such that a total gain across a loop, which comprises the amplifier, the first and second oscillation tanks, and the first and second phase-shift generators, is equal to substantially one.
8. (Currently Amended) The oscillator of claim 7, comprising ~~an additional phase-shift generator to shift by substantially $\pi/2$ radians a phase of a signal from the second oscillation tank~~ one or more transconductors to convert an oscillation signal of said loop from voltage to current.
9. (Currently Amended) A wireless communication device comprising:
- a dipole antenna to send and receive wireless signals; and
 - a quadrature oscillator comprising a phase-shift generator to provide a phase-shift of substantially $\pi/2$ radians to an oscillation signal between a first oscillation tank, which provides substantially no phase-shift, and a second oscillation tank;
 - a second phase-shift generator to shift by substantially $\pi/2$ radians a phase of a signal from said second oscillation tank; and
 - a phase-inverter to invert a phase of a signal from said additional phase-shift generator.

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wherein the phase-inverter comprises an amplifier to provide a gain such that a total gain across a loop, which comprises the amplifier, the first and second oscillation tanks, and the first and second phase-shift generators, is equal to substantially one.

10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Currently Amended) The wireless communication device of claim ~~[[13]]~~ 9, comprising one or more transconductors to convert said oscillation signal from voltage to current.
15. (Currently Amended) A method comprising:
~~providing~~ generating a first phase-shift of substantially $\pi/2$ radians to an oscillation signal between a first oscillation tank, which provides substantially no phase-shift, and a second oscillation ~~[[tank.]]~~ tank;
generating a second phase-shift of substantially $\pi/2$ radians to the oscillation signal from the second oscillation tank; and
inverting the phase of the oscillation signal,
wherein inverting the phase comprises providing a gain such that a total gain across a loop, which comprises the first and second oscillation tanks, generating the first phase-shift, and generating the second phase-shift, is equal to substantially one.

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16. (Currently Amended) The method of claim 15, wherein the second oscillation tank produces substantially no phase-shift, ~~and further comprising providing a phase shift of substantially $\pi/2$ radians to the oscillation signal from the second oscillation tank.~~
17. (Canceled)
18. (Canceled)
19. (Currently Amended) The method of claim ~~[[18]]~~ 15, comprising converting said oscillation signal from voltage to current.